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THE NECESSITY OF TECHNICAL STANDARDS FOR HEAVY MECHANICAL INDUSTRY AND THE LATIN AMERICAN ASSOCIATION OF FREE TRADE

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THE NECESSITY OF TECHNICAL STANDARDS FOR HEAVY MECHANICAL INDUSTRY AND THE LATIN AMERICAN ASSOCIATION OF FREE TRADE

by

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1. The necessity of technical standards for orderly industrial development and technological progress is an acknowledged fact throughout the world; there is no purpose in elaborating on this theme.

2. The modest scope of this work is: (a). To relate briefly the Brazilian experience in the field of heavy mechanical industry, as viewed by GEIMAPE (Executive Group for the Heavy Equipment Industry), and the difficulties encountered, due to the lack of technical standards; and (b). To focus the attention of the participants of this Conference on this problem, which is common to all developing countries in the world, pointing out the need for a coordinated U.N. action in order to solve it.

3. If a frank, open debate on these points follows its presentation, it will have fulfilled its original goal.

4. Before passing on to the main topic, a few words of explanation should first be said about the Brazilian Government's "Executive Group" policy and GEIMAPE.

5. As all nations laboring up the steep initial steps of industrial development, Brazil finds itself nowadays in that classical — and difficult — position of establishing or expanding its basic industries with a minimum of load on its already overburdened balance of payments. In order to coordinate all efforts and decisions, private and governmental, and thus avoid a dispersion of resources, the President of the Republic created a number of Executive Groups, directly responsible to him, for all the industrial sectors in which the most crucial bottlenecks are felt.

6. Working as a council, with representatives of all governmental and private entities that have a bearing on the sector under its jurisdiction, led by a President and an Executive Secretary, each of these Groups is authorized by decree to regulate, guide and supervise all activities in an assigned sector, and to encourage private enterprise to work under its rule by means of special credit facilities and tax exemptions for approved projects. The spectacular success of the first of such Groups (the Executive Group for the Automotive Industry: GEIA, under whose guidance the yearly production of automotive vehicles grew from nil, in 1956, to more than 100,000 units, in 1961) encouraged the Government to create new ones, whose beneficial influence is being deeply felt in the speed of Brazilian industrial development.

7. One of the youngest of these Groups is GEIMAPE.

8. In 1961, the Economic Commission for Latin America (ECLA), with the participation of GEIMAPE and ABDIB (Brazilian Association for the Development of

Basic Industries — a private manufacturers' association represented in GEIMAPE), produced an evaluation of the Brazilian heavy mechanical industry and a projection of its development into the 1961-1970 decade, with two main objectives:

(a). First, an analysis of its capacity to supply the national demand for equipment in five basic industrial sectors: oil and its by-products, steel, electric power, cement and celulose and paper;

(b). Second, a definition of its main problems and a formulation of the measures necessary to make this capacity effective, with maximum utilization of existing production facilities and resources.

9. This study revealed that the national demand for heavy equipment in the five chosen sectors, for the 1961-1970 decade, amounts to an estimated total of US$ 875.3 million. On the other hand, it showed that the local industry could supply approximately 83% of this total, i.e., US$ 725 million, provided, however, that certain obstacles be removed.

10. Among these, the lack of local engineering and of appropriate technical standards assume extraordinary significance.

11. The manufacture of basic industrial equipment, as defined, differs from other industries in that it must be done "to order", according to the characteristics of each case and following an engineering project.

12. Under such conditions, the results of the above-mentioned study, as well as of direct contact with local industry, led to the conclusion that the technological progress of basic industry in Brazil has been retarded by two main factors:

(a). First, the adaptation of foreign know-how to the actual equipment manufacturing resources of Brazil — an adaptation demanded by the engineers who do the designing and buying, usually foreign, with no concern for the country's peculiar conditions, either in the producer or in the consumer market. The construction standards used vary with the origin of the equipment and, therefore, force the local manufacturers to build equipment according to individual solicitations, improvising emergency solutions that are highly detrimental to industrial costs, since the high quality standards demanded constitute an irreducible necessity in the competition with foreign-made equipment;

(b). Second, the fact that the great majority of Brazilian producers of heavy equipment are either affiliated to, or work under license of, foreign firms of such varied origin that it has been impossible to establish what could be termed as technological unity.

13. Therefore, the progress of basic industry in Brazil is at present dominated by the imperative need of technical standards to guide its activities, and of native engineering that would consider the specific industrial conditions of the country.

14. The lack of proper technical standards has been one of the most powerful single factors against this industry because, besides causing unnecessary increases in costs and delays in delivery, with a consequent reduction of the entire producer market, it also inhibits the action of local designers, who could become incentive elements of inestimable importance to this vital industrial sector. As a result, it has now become extremely urgent:

(a). To elaborate proper technical standards, adequate to the nation's present stage of economic and industrial development, to be periodically revised, in order to consolidate the position attained to guarantee the progress of the newly born technology;

(b). To develop these standards in such a manner as to cover harmoniously all production sectors, in order to avoid disrupting discrepancies between interrelated fields.

15. Some attempts have been made to increase the pace of our technocal standardization to a levelccompatible with the speed of our industrial expansion but, despite the efforts of all elements involved, no impressive results have been achieved, due mostly to the lack of organized support of

the industry as a whole, and of financial resources.

16. One initiative that produced outstanding results in the expansion and improvement of basic equipment output is ABDIB, the previously mentioned private manufacturers's association represented in GEIMAPE. Born of the need and the opportunity of supplying PETROBRÁS (the state-controlled oil monopoly) with drilling and refining equipment, it meant the manufacturers' realization that, instead of competing among themselves in a relatively small market like Brazil, they could accomplish more by complementing each other's capacity. As a result, it spurred the production of oil-refining equipment to such a level that more than 70% in value of the newest PETROBRÁS refinery of Duque de Caxias was built in Brazil. It has also achieved equally important results in other fields, besides oil-refining equipment, but not in standardization, because, out of an understandable desire to coordinate all efforts and unify all results, it supports and depends upon ABNT (Brazilian Technical Standards Association). The latter, however, being a private association officially recognized by the Government as sole authorized standardization agency, fights against both negative factors mentioned above.

17. In a new attack on the problem, GEIMAPE, ABDIB and ABNT have jointly devised a Special Program, to elaborate some very badly needed standards. If successful, this Program will give new directives to the solution of the standardization problem. It will extend itself for two and a half years, divided in five one-semester phases, previously and separately planned. Its objective, in these five semesters of activities, will be the elaboration of approximately:

90 raw materials specifications;
8 basic test methods; and
8 construction standards

chosen by ABDIB as the most needed. Recognizing the primary importance of specifications and standards for raw materials and equipment for chemical processing industries, most of the Special Program's work will be dedicated to this sector.

18. The following working method will be obeyed:

(a). To save time, a team of four specialists, with the necessary office help, will apply itself, whenever possible, to the translation and adaptation of foreign standards to Brazilian conditions and units and, only when necessary, will elaborate completely new standards.

(b). The appreciation and approval of each standard will be carried out by a Standardization Commission, drafted by ABNT for this purpose, with the following composition:

1 President — one of the Program's specialists, charged with that particular standard, who will vote only when all other votes come to a draw;

2 Representatives of Equipment Manufacturers — elected by interested firms;

2 Representatives of Raw material Producers — also elected by interested firms;

2 Representatives of Consumers — also elected by interested firms;

1 Representative from involved Government Agencies;

1 Representative from technical associations or laboratories;

1 Representative of ABNT.

As an incentive to their participation in the Commission's work, the members will be remunerated according to their presence at the Commission's meetings. It is estimated that an average of two Commission meetings per standard will be necessary.

(c). For each approved standard, a Permanent Commission will be nominated, which will examine all revisions or modifications that are deemed necessary or solicited by interested elements for that particular standard. Each Permanent Commission will be composed of firms closely related to the manufacture and utilization of the materials and/or equipment covered by the respective standard. The choice of a firm for a Permanent Commission will assume, as in other countries, an honorary character, due to the technical advantages and prestive accorded to elected firms. In this case, their representatives will not be remunerated and more than three absences from Commission meetings will automatically exclude the uninterested firm.

(d). Two foreign specialists, to be solicited from the United Nations Special Fund for Technical Assistance, will collaborate with the local team as consultants. They will supervise the work and contribute with their experience and unbiased opinion to the selection and approval of easily acceptable standards.

19. At a total estimated cost of US$ 200,000, it is believed that this Special Program will fulfill Brazil's most imediate needs and, still more important, that it will establish new directives for the introduction of standardication in the country.

20. Up to this point, we have related here our experiences, our difficulties and our hopes, in the belief that they can serve as orientation to other countries facing similar problems.

21. There still remains, however, the important international aspect of standardization, which has not yet been satisfactorily faced by developing nations, nor by the United Nations Organization.

22. This aspect concerns primarily countries like the members of the ALALC (Latin American Free Trade Association), whose ultimate goal is the pooling of their individual resources for a faster development of the group as a whole.

23. The ALALC is a novel initiative, It differs from its existing counterparts in several basic points. Among them:

(a). It has no "mother" country from which to import its technology, like the British Commonwealth;

(b). Its members are not in an advanced industrial stage, as the original members of the European Common Market;

(c). None of its members have any kind of technological unity; on the contrary, in all of them, heavy industry is an amalgam of the various developed technologies of the world.

24. At the present time, all the more industrialized members of the ALALC are going through a phase of acute demand for heavy equipment. In such a group of countries, of industry and technology of such varied origin, technical standards will necessarily play a vital role in defining the markets for such equipment. If these countries are to complement each other's market, not a single one of the entire group can afford to ignore the other's technical standards —in other words, the stage of their technology.

25. In view of this situation, it is at this point, when standardization is either nonexistent or at an incipient stage, that a concerted group action will prove the most effective and beneficial; specially so if such an action is sponsored by the United Nations, being, as it is, above all the regional arguments that will inevitably arise.

26. It is hard, at the present time, to define what specific course this action should take, but the fact remains that a study of the necessary steps in standardization that a country, or a group of countries, should take, in accordance with its stage of industrialization, is one of the greatest contribution that the United Nations Organization could and should make to its newly developing members

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